

```

-n 1 1.682020 -n 2 3.736830 -n 3 7.292050
-eg 0 2 116.010723 -eg 0 3 160.246047
-ma x 0.881098 0.561966 0.881098 x 2.797460 0.561966 2.797460 x
-ej 0.028985 3 2 -en 0.028985 2 0.287184
-ema 0.028985 3 x 7.293140 x 7.293140 x x x x x
-ej 0.197963 2 1 -en 0.303501 1 1

```

```

1 demographic_events = [
2     # CEU and CHB merge into B with rate changes at T_EU_AS
3     msprime.MassMigration(
4         time=T_EU_AS, source=2, destination=1, proportion=1.0),
5     msprime.MigrationRateChange(time=T_EU_AS, rate=0),
6     msprime.MigrationRateChange(
7         time=T_EU_AS, rate=m_AF_B, matrix_index=(0, 1)),
8     msprime.MigrationRateChange(
9         time=T_EU_AS, rate=m_AF_B, matrix_index=(1, 0)),
10    msprime.PopulationParametersChange(
11        time=T_EU_AS, initial_size=N_B, growth_rate=0,
12        population_id=1),
13    # Population B merges into YRI at T_B
14    msprime.MassMigration(
15        time=T_B, source=1, destination=0, proportion=1.0),
16    # Missing in msprime documentation
17    msprime.MigrationRateChange(time=T_B, rate=0),
18    # Size changes to N_A at T_AF
19    msprime.PopulationParametersChange(
20        time=T_AF, initial_size=N_A, population_id=0)
21 ]

```

```

dbg = msprime.DemographyDebugger(
    population_configurations=population_configurations,
    demographic_events=demographic_events,
    migration_matrix=migration_matrix)
dbg.print_history()
ts = msprime.simulate(
    ..., # parameters defining samples, sequence length, etc
    population_configurations=population_configurations,
    demographic_events=demographic_events, # Missing in Ref. 11
    migration_matrix=migration_matrix)

```

```

demography = msprime.Demography(
    populations=populations,
    events=demographic_events,
    migration_matrix=migration_matrix)
dbg = demography.debug()
dbg.print_history()
ts = msprime.simulate(
    ..., # parameters defining samples, sequence length, etc
    demography=demography)

```